Listing of Claims:

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. Material to be inserted is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[ ]].

1. (Original) A needle-free injection system, comprising:

a nozzle including a fluid chamber and an injection orifice; and

a filling adapter secured to the nozzle and configured to couple the nozzle with an external supply of injectable fluid to enable filling of the fluid chamber with injectable fluid, where the needle-free injection system is configured to prevent delivery of an injection from the injection orifice into an injection site until the filling adapter's ability to enable filling of the fluid chamber has been disabled.

2. (Original) The needle-free injection system of claim 1, further comprising a vial adapter configured to secure to and selectively seal a vial containing the external supply of injectable fluid, where the vial adapter and the filling adapter have corresponding fittings, and where engaging the corresponding fittings fluidly couples the external supply of injectable fluid with the fluid chamber of the nozzle.

3. (Original) The needle-free injection system of claim 2, where the filling adapter is frangibly attached to the nozzle such that the filling adapter cannot be reattached to the nozzle after being broken away from the nozzle, and where the needle free-injection system is configured to prevent delivery of the injection from the injection orifice into the injection site until the filling adapter is broken away from the nozzle.

4. (Original) The needle-free injection system of claim 2, where the vial adapter includes a valve configured to seal the external supply of injectable fluid upon disengagement of the corresponding fittings of the vial adapter and filling adapter.

5. (Original) The needle-free injection system of claim 2, where the vial adapter includes a fluid pathway which is recessed within an external shroud.

6. (Original) The needle-free injection system of claim 5, where the needle-free injection system is configured such that, after the filling adapter is detached from the nozzle, and upon an attempt to couple the external supply of injectable fluid with the nozzle, the external shroud of the vial adapter prevents the fluid pathway of the vial adapter from contacting the injection orifice.

7. (Original) The needle-free injection system of claim 1, where the filling adapter is secured to the nozzle and disposed relative to the injection orifice so as to prevent the injection orifice from being placed adjacent to a surface of the injection site.

8. (Original) The needle-free injection system of claim 7, where the filling adapter is frangibly attached to the nozzle such that the filling adapter cannot be reattached to the nozzle after being broken away from the nozzle, and where once the filling adapter is broken away from the nozzle, the nozzle can be positioned so that the injection orifice is adjacent the surface of the injection site.

9. (Original) The needle-free injection system of claim 1, where the filling adapter is secured to and positioned relative to the nozzle so that an obstruction of the filling adapter is positioned to interfere with delivery of an injection along an injection axis extending outward from the injection orifice.

10. (Original) The needle-free injection system of claim 9, where the filling adapter is frangibly attached to the nozzle such that the filling adapter cannot be reattached to the nozzle after being broken away from the nozzle, and where once the filling adapter is broken away from the nozzle, the injection axis is not obstructed by the filling adapter.

11. (Original) The needle-free injection system of claim 1, where the nozzle includes a seal-defeating structure on an outer surface of the nozzle surrounding the injection orifice, to inhibit refilling of the fluid chamber through the injection orifice after the filling adapter has been detached from the nozzle.

12. (Original) The needle-free injection system of claim 11, where the seal-defeating structure includes channels formed on the outer surface of the nozzle surrounding the injection orifice.

13. (Withdrawn) A needle-free injection system, comprising:

a nozzle including a fluid chamber and an injection orifice in fluid communication with the fluid chamber; and

a filling adapter frangibly attached to the nozzle and configured to enable attachment of an external supply of injectable fluid to the nozzle to enable filling of the fluid chamber with injectable fluid.

14. (Withdrawn) The needle-free injection system of claim 13, where the filling adapter is configured to prevent delivery of an injection of injectable fluid from the fluid chamber out through the injection orifice to an injection site unless the filling adapter is detached from the nozzle, and where such detachment of the filling adapter disables the ability to couple the external supply of injectable fluid to the nozzle.

15. (Withdrawn) The needle-free injection system of claim 14, where the filling adapter is attached to the nozzle relative to the injection orifice so as to obstruct expulsion of injectable fluid out from the injection orifice along an injection axis.

16. (Withdrawn) The needle-free injection system of claim 15, where the filling adapter includes an obstruction which blocks the injection axis, and where the filling adapter is configured to permit injectable fluid to pass around the obstruction and into the fluid chamber through the injection orifice during filling of the fluid chamber.

17. (Withdrawn) The needle-free injection system of claim 13, further comprising an ejector mechanism configured to be repeatedly armed and discharged, where the nozzle is configured to be selectively engaged with the ejector mechanism so that, after engagement of the nozzle with the ejector mechanism and upon discharging of the ejector mechanism, fluid is forcibly ejected from the fluid chamber and out through the injection orifice.

18. (Withdrawn) The needle-free injection system of claim 17, where the nozzle is part of a nozzle assembly that further includes a plunger slidably and sealingly engaged within the fluid chamber of the nozzle.

19. (Withdrawn) The needle-free injection system of claim 18, where the fluid chamber is sealed by the plunger so that when the nozzle assembly is engaged with the ejector mechanism, fluid within the fluid chamber is prevented from contacting the ejector mechanism.

20. (Withdrawn) The needle-free injection system of claim 18, where the ejector mechanism includes a firing member configured to retract and advance during arming and discharging of the ejector mechanism, and a plunger coupling device configured to couple the firing member and the plunger so that the plunger retracts during retraction of the firing member.

21. (Withdrawn) The needle-free injection system of claim 20, where the firing member is configured to push the plunger forward during discharging of the ejector mechanism.

22. (Withdrawn) The needle-free injection system of claim 20, where the ejector mechanism is configured so that the plunger coupling device automatically releases the plunger during advancement of the firing member.

23. (Withdrawn) The needle-free injection system of claim 18, where the ejector mechanism includes a locking device configured to lock the nozzle assembly in place and maintain the nozzle assembly in engagement with the ejector mechanism.

24. (Withdrawn) The needle-free injection system of claim 23, where the locking device automatically locks the nozzle assembly in place upon insertion of the nozzle assembly into the ejector mechanism.

25. (Withdrawn) The needle-free injection system of claim 23, where the ejector mechanism includes a user-operable release mechanism configured to selectively unlock the locking device and thereby release the nozzle assembly from engagement with the ejector mechanism.

26. (Currently amended) The needle-free injection system of claim [[17]] **34**, where the ejector mechanism includes a spring that is compressed during arming of the ejector mechanism, and that decompresses during discharging of the ejector mechanism to forcibly eject fluid from the fluid chamber and out through the injection orifice.

27. (Original) The needle-free injection system of claim 26, further comprising an arming mechanism and a cable operatively coupled between the arming mechanism and the spring, the arming mechanism being selectively operable to pull the cable and thereby compress the spring to arm the ejector mechanism.

28. (Withdrawn) The needle-free injection system of claim 13, where the filling adapter includes a luer connector configured to engage a corresponding luer connector on the external supply of injectable fluid.

29. (Withdrawn) A needle-free injection system, comprising:

a nozzle including a fluid chamber and an injection orifice; and

a filling adapter configured to couple the nozzle with an external supply of injectable fluid to enable filling of the fluid chamber with injectable fluid, the filling adapter being frangibly attached to the nozzle relative to the injection orifice so as to interfere with delivery of an injection of injectable fluid from the fluid chamber out through the injection orifice to an injection site.

30. (Withdrawn) The needle-free injection system of claim 29, where the filling adapter is disposed relative to the injection orifice so as to interfere with injection delivery unless the filling adapter is detached from the nozzle, and where such detachment of the filling adapter disables the ability to couple the external supply of injectable fluid to the nozzle.

31. (Withdrawn) The needle-free injection system of claim 30, where the filling adapter is attached to the nozzle relative to the injection orifice so as to obstruct expulsion of injectable fluid out from the injection orifice along an injection axis.

32. (Withdrawn) The needle-free injection system of claim 31, where the filling adapter includes an obstruction which blocks the injection axis, and where the filling adapter is configured to permit injectable fluid to pass around the obstruction and into the fluid chamber through the injection orifice during filling of the fluid chamber.

33. (Currently amended) ~~A~~ **The** needle free injection system **of claim 1**~~,~~ ~~comprising:~~

~~a nozzle including a fluid chamber and an~~ **wherein the** injection orifice **is** adapted to enable delivery of pressurized injections of fluid from the fluid chamber out through the injection orifice into an injection site; and

~~a filling adapter attached to the nozzle and configured to couple an external supply of injectable fluid to the nozzle to enable the fluid chamber to be filled with injectable fluid, where~~ **wherein disabling** the filling adapter**'s ability to enable filling of the fluid chamber includes detaching** ~~prevents delivery of an injection unless~~ the filling adapter ~~is detached~~ from the nozzle~~, and where such detachment of the filling adapter disables the ability to couple the external supply of injectable fluid to the nozzle~~.

34. (Original) The needle-free injection system of claim 33, further comprising an ejector mechanism configured to be repeatedly armed and discharged, where the nozzle is configured to be selectively engaged with the ejector mechanism so that, after engagement of the nozzle with the ejector mechanism and upon discharging of the ejector mechanism, fluid is forcibly ejected from the fluid chamber and out through the injection orifice.

35. (Original) The needle-free injection system of claim 34, where the nozzle is part of a nozzle assembly that further includes a plunger slidably and sealingly engaged within the fluid chamber of the nozzle.

36. (Original) The needle-free injection system of claim 35, where the ejector mechanism includes a firing member configured to retract and advance during arming and discharging of the ejector mechanism, and a plunger coupling device configured to couple the firing member and the plunger so that the plunger retracts during retraction of the firing member.

37. (Original) The needle-free injection system of claim 36, where the firing member is configured to push the plunger forward during discharging of the ejector mechanism.

38. (Original) The needle-free injection system of claim 36, where the ejector mechanism is configured so that the plunger coupling device automatically releases the plunger during advancement of the firing member.

39. (Currently amended) The needle-free injection system of claim [[34]] **35**, where the ejector mechanism includes a locking device configured to lock the nozzle assembly in place and maintain the nozzle assembly in engagement with the ejector mechanism.

40. (Original) The needle-free injection system of claim 39, where the locking device automatically locks the nozzle assembly in place upon insertion of the nozzle assembly into the ejector mechanism.

41. (Original) The needle-free injection system of claim 39, where the ejector mechanism includes a user-operable release mechanism configured to selectively unlock the locking device and thereby release the nozzle assembly from engagement with the ejector mechanism.

42. (Withdrawn) The needle-free injection system of claim 33, where the filling adapter is frangibly attached to the nozzle.

43. (Currently amended) The needle-free injection system of claim [[42]] **3**, where the filling adapter is attached to the nozzle relative to the injection orifice so as to obstruct expulsion of injectable fluid out from the injection orifice along an injection axis.

44. (Original) The needle-free injection system of claim 43, where the filling adapter includes an obstruction which blocks the injection axis, and where the filling adapter is configured to permit injectable fluid to pass around the obstruction and into the fluid chamber through the injection orifice during filling of the fluid chamber.

45. (Original) The needle-free injection system of claim 33, where the filling adapter includes a luer connector configured to engage a corresponding luer connector on the external supply of injectable fluid.

46. (Withdrawn) A needle-free injection system, comprising:

a disposable single-use nozzle assembly, including a fluid chamber in fluid communication with an injection orifice, and a plunger slidably and sealingly disposed within fluid chamber so that fluid within the fluid chamber is forcibly expelled out through the injection orifice along an injection axis upon forcible advancement of the plunger within the fluid chamber; and

an ejector mechanism to which the nozzle assembly may be selectively attached, including:

a firing member configured to retract and advance during arming and discharging of the ejector mechanism, the firing member being configured to push the plunger forward during discharging of the ejector mechanism; and

a plunger coupling device secured to the firing member and movable between a coupled position and a released position, where in the coupled position the plunger coupling device couples the plunger to the firing member to enable retraction of the plunger upon retraction of the firing member, and where the ejector mechanism is configured so that the plunger coupling device is automatically moved into the released position during advancement of the firing member, to thereby facilitate removal of the nozzle assembly from the ejector mechanism after delivery of an injection.

47. (Withdrawn) The needle-free injection system of claim 46, further comprising a filling adapter attached to the nozzle assembly and configured to enable attachment of an external supply of injectable fluid to the nozzle assembly to enable filling of the fluid chamber with injectable fluid.

48. (Withdrawn) The needle-free injection system of claim 47, where the filling adapter is frangibly attached to the nozzle assembly, such that detachment of the filling adapter from the nozzle assembly disables the ability to couple the external supply of injectable fluid to the nozzle assembly.

49. (Withdrawn) The needle-free injection system of claim 48, where the filling adapter includes an obstruction positioned so as to block the injection axis at a location forward of the injection orifice.

50. (Withdrawn) A method of delivering a needle-free injection to an injection site by forcibly ejecting fluid from a fluid chamber of a nozzle and out through an injection orifice of the nozzle, the method comprising:

coupling an external supply of injectable fluid to a filling adapter that is attached to the nozzle;

filling the fluid chamber with injectable fluid by causing injectable fluid to flow from the external supply through the filing adapter and injection orifice and into the fluid chamber;

breaking the filling adapter away from the nozzle; and

forcibly expelling fluid out of the fluid chamber through the injection orifice along an injection axis.

51. (Withdrawn) The method of claim 50, where the filling adapter is frangibly attached to the nozzle.

52. (Withdrawn) The method of claim 50, where the breaking the filling adapter away from the nozzle is performed so as to prevent an operator from re-attaching the filling adapter to the nozzle.

53. (Withdrawn) The method of claim 50, further comprising obstructing the injection axis prior to breaking the filling adapter away from the nozzle, where such obstructing occurs at a location between the injection orifice and the injection site.

54. (Withdrawn) The method of claim 53, where the filling adapter obstructs the injection axis at the location between the injection orifice and the injection site prior to breaking the filling adapter away from the nozzle.